CLAIMS

- 1. A method of evaluating the compositional characteristics of an entire corn plant, the method comprising:
  - (a) selecting a population of mature corn plants to be evaluated;
- (b) selecting a limited number of representative plants from the population;
  - (c) harvesting the representative plants;
  - (d) grinding the representative plants into a homogeneous mixture:
  - (e) analyzing a sample of the homogeneous mixture in a near infrared spectrometer; and
  - (f) comparing the analysis with an existing correlation between near infrared analyses and wet-chemistry tested nutritional compositional characteristics to predict the compositional characteristics of the corn plant population.
  - 2. The method of claim 1 wherein at least three representative plants from the population are selected based on visually surveyed characteristics.
  - 3. The method of claim 1 wherein the representative plants are harvested at physical maturity.
  - 4. The method of claim 1 wherein the representative plants are ground in a bowl grinder.
  - 5. The method of claim 1 wherein the sample is analyzed by scanning at a plurality of locations.

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